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This contribution presents preliminary results from the diagnostic study of a 15th century Armenian illuminated manuscript held in the collection of Matenadaran ancient manuscripts Museum, in Yerevan (Armenia). The manuscript was produced in a scriptorium at Aghtamar Island, in the Vaspurakan region of historic Armenia. Fifteen small fragments (mostly < 1 mm) were taken from the manuscript, selecting them in order to cover all hues present. The fragments were analyzed by means of microscopic techniques in order to characterize the overall palette used by the artist for the miniatures and to have diagnostic information on the history of the manuscript itself. Considering the extremely limited size of the samples, it was mandatory the use of techniques able to work under the microscopic scale in order to obtain reliable information. The techniques used were therefore Raman spectroscopy, Surface Enhanced Raman Spectroscopy (SERS), Scanning Electron Microscopy - Energy-dispersive X-ray spectroscopy (SEM-EDX) and HPLC-mass spectrometry. In addition, UV-Visible diffuse reflectance spectrophotometry with optic fibres (FORS) was used on the samples to have a preliminary identification of the colourants.

The combination of molecular (Raman, SERS, FORS, HPLC-MS) and elemental (SEM-EDX) techniques allowed the characterization and identification of hues used in miniatures. Natural ultramarine blue, indigo, cinnabar, minium and orpiment were the main pigments identified. Green hues were obtained with a mixture of indigo and orpiment, the so-called *vergaut*. Particularly relevant was the identification in black areas of irongall ink, a colourant mostly used as an ink but in this case used as a pigment for black, as it was typical of early medieval artists. In addition, FORS analysis highlighted in the brilliant red samples the presence of a dye from scale insects, which could be attributed to one between kermes, Armenian or Polish cochineal and lac dye. Work is in progress in order to identify the right colourant by means of SERS analysis and HPLC-MS analysis.

Interesting information was obtained from the restoration point of view also. In fact, Raman analysis highlighted the presence of 20th century pigments such as phthalocyanine blue and Naphthol Red, clear indications of a contemporary restoration intervention.

Despite the very limited size of the samples, it was possible to obtain a large amount of information useful for the artistic, historical and conservative overview of the manuscript.